CLAIMS

1. A data distribution system, comprising:
a plurality of data sources each capable of transmitting a data item;
and
a data vending machine capable of receiving the data item from said
plurality of data sources and selling the received data item to a user;
wherein
said data vending machine includes
a data selecting apparatus operated by a user to select a desired data
item,
a data source selecting apparatus connected to said data selecting
apparatus, and selecting, among said plurality of data sources, that one
holding the data item selected by said data selecting apparatus, in
accordance with a specific standard,
a data receiving apparatus connected to said data source selecting
apparatus and receiving said selected data item from the data source
selected by said data source selecting apparatus, and
a data updating apparatus to which an external storage device is
detachably mounted, for writing the data item received by said data
receiving apparatus to said external storage device.

2. The data distribution system according to claim 1, wherein
said data vending machine includes
a data information table connected to said data source selecting
apparatus, storing information specifying a desired data item, a size of each
data item, and information specifying a data source holding each data item,
and
a data rate table connected to said data source selecting apparatus,
storing rate of data transmission from said plurality of data sources to said
data vending machine; and
said data source selecting apparatus selects that data source by
which time necessary for reception of the selected data item becomes the

shortest, by making reference to said data information table and said data rate table.

3. The data distribution system according to claim 2, wherein

said data information table further stores price information of each said data item;

said data vending machine further includes a clock specifying a present time;

said data updating apparatus has a function of storing in said external storing medium, information specifying time obtained by referring to said clock when a data item is written to said external storage medium and the price information of the data item;

said data vending machine further includes a charging apparatus for charging for the data item already recorded on said external storage medium to the user, based on the price information of the data item already recorded on said external storage medium at the time of writing the data to said external storage medium by said data updating apparatus, the time of writing of the last data item to said external storage medium recorded on said external storage medium, and on the time obtained by referring to said clock.

4. The data distribution system according to claim 2, wherein

said data information table further stores price information of each said data item;

said data distribution system further comprising a data reproducing apparatus for reproducing a data item by mounting said external storage medium,

said data reproducing apparatus including means for recording information related to reproduction of said data item in said external storage medium every time said external storage medium is mounted and a data item is reproduced; wherein

said data vending machine further includes a charging apparatus charging for the data item already recorded on said external storage

medium to the user, based on the price information of the data item already
recorded on said external storage medium at the time of writing data to
said external storage medium by said data updating apparatus, and on the
information related to reproduction of said data item already recorded on
said external storage medium, recorded on said external storage medium.

5.   The data distribution system according to claim 1, wherein said
data vending machine further includes a data buffering apparatus for
temporarily storing a received data item, and
        said data source selecting apparatus handles said data buffering
apparatus as one of said plurality of data sources.

6.   The data distribution system according to claim 1, wherein
        each of said plurality of data sources repeatedly transmits data
items;
        said data vending machine further includes a transmission schedule
table connected to said data source selecting apparatus, storing a
transmission schedule of data items by said plurality of data sources; and
        said data source selecting apparatus receives a data item by selecting
a data source from which said selected data item can be received at the
earliest timing, among said plurality of data sources, by making a reference
to said transmission schedule table.

7.   The data distribution system according to claim 6, wherein said
plurality of data sources determine distribution of time allocated to
transmission of each data item in accordance with a predetermined
standard.

8.   The data distribution system according to claim 7, wherein said
plurality of data sources determine distribution of time allocated to
transmission of each data item, as a function of frequency of selection of
each data item by said selecting apparatus.

9.　The data distribution system according to claim 8, wherein said plurality of data sources divide each data item to a plurality of blocks and transmits time-divisionally in accordance with said time distribution respectively, and

5　　　said data receiving apparatus receives and integrates the plurality of blocks corresponding to said selected data item to restore said selected data item.

10　　　10.　The data distribution system according to claim 6, wherein said plurality of data sources divide each data item into a plurality of blocks and transmits time-divisionally, and

said data receiving apparatus receives and integrates the plurality of blocks corresponding to said selected data item to restore said selected data

15　item.

11.　The data distribution system according to claim 1, further comprising a vendor distributing non-electronic data, at least capable of receiving transmission of information from said data vending machine;

20　wherein

said data selecting apparatus is capable of selecting said vendor as one of the data sources and designating a non-electronic data desired by a user; and

said data receiving apparatus has a function of transmitting

25　information specifying said non-electronic data to the vendor selected by said data selecting apparatus, and transmitting information including specific contents of processing to be performed on said non-electronic data.

12.　A data searching apparatus, comprising:

30　　　a storage device storing a plurality of data items as a set of partial data items structured in a hierarchy of one or a plurality of levels;

a search condition setting apparatus operated by a user to set a search condition desired by the user and desired level of said one or the

plurality of levels from which retrieval is desired by the user;

a searching apparatus searching said storage device in accordance with the search condition set by said search condition setting apparatus, and retrieving a partial data item matching said search condition on the level set by said user; and

a writing apparatus to which an external storage device is detachably mounted, for writing said partial data item retrieved by said searching apparatus to said external storage device.

13. A copied data detecting system, comprising

a data reproducing apparatus to which an external storage medium is mounted, for reproducing a data item recorded on said external storage medium; and

a data checking apparatus connected by communication to said data reproducing apparatus, for determining whether the external storage medium mounted on said data reproducing apparatus and of which reproduction is instructed has a data copied without authorization recorded thereon; wherein

in a normal state of use, each said external storage medium has a unique authentication data allocated and recorded thereon, said authentication data being copied as it is to an external storage medium copied without authorization;

said data reproducing apparatus includes a reproducing apparatus to which said external storage medium is mountable, for reproducing a data item recorded on said external storage medium in response to an instruction of reproduction,

a reproduction switch instructing reproduction of the data item to said reproducing apparatus, and

means responsive to an operation of said reproduction switch for transmitting the authentication data recorded on said external storage medium to said data checking apparatus; and

said data checking apparatus includes

a data management table recording the authentication data

transmitted from said data reproduction apparatus for managing authentication data of the external storage medium which is being reproduced, and

determining means for determining, by determining whether the authentication data transmitted from said data reproducing apparatus already exists in said data management table or not, whether the external storage medium mounted on said data reproducing apparatus is an unauthorized copy or not.

14. The copied data detecting system according to claim 13, wherein said data checking apparatus further includes means responsive to determination by said determining means that said external storage medium mounted on said data reproducing apparatus is an unauthorized copy, for transmitting a reproduction-prohibited signal to said data reproducing apparatus; and

said data reproducing apparatus further includes means responsive to said reproduction-prohibited signal for stopping reproduction of the data on said external storage medium by said reproducing apparatus.

15. The copied data detecting system according to claim 13, wherein said data reproducing apparatus further includes an end switch used by a user for instructing end of data reproduction, and

means responsive to an operation of said end switch for transmitting the authentication data recorded on said external storage medium together with information indicating end of reproduction to said data checking apparatus; and

said data checking apparatus includes means responsive to said signal indicating end of reproduction for deleting the corresponding authentication data from said data management table.

16. A copied data detecting system comprising

a data reproducing apparatus to which an external storage medium is mounted for reproducing a data item recorded on said external storage

medium; and

a data checking apparatus connected by communication to said data reproducing apparatus for determining whether said external storage medium mounted on said data reproducing apparatus and of which reproduction is instructed has a data copied without authorization recorded thereon; wherein

in a normal state of use, a unique authentication data is allocated to and recorded on each of said external storage medium, said authentication data being copied as it is to an external storage medium copied without authorization;

said data reproducing apparatus includes

a reproducing apparatus to which said external storage medium is mountable, for reproducing a data item recorded on said external storage medium in response to an instruction of reproduction,

a reproduction switch instructing reproduction of the data item to said reproducing apparatus, and

transmitting means responsive to an operation of said reproduction switch for transmitting the authentication data recorded on said external storage medium to said data checking apparatus repeatedly in accordance with a prescribed transmission pattern; and

said data checking apparatus includes

a data management table recording the authentication data transmitted from said data reproducing apparatus and time of transmission, for managing the authentication data of the external storage medium which is being reproduced, and

determining means responsive to the authentication data transmitted from said data reproducing apparatus, for determining, based on the record of said data management table and time of transmission of present authentication data, whether the external storage medium mounted on said data reproducing apparatus is an unauthorized copy.

17.   The copied data detecting system according to claim 16, wherein said transmission means starts repeated transmission of said

authentication data to said data checking apparatus after a prescribed time period in response to an operation of said reproduction switch, and said prescribed time period is selected to be a predetermined time period longer than a time interval of said repeated transmission.

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18. A copied data detecting system comprising:

a data vending machine allowing mounting of an external storage medium and selling data to a holder of said external storage medium by writing a data item to said external storage medium or updating a data

10 item recorded on said external storage medium; and

a data checking apparatus connected by communication to said data vending machine for determining whether the external storage medium mounted on said data vending machine has data copied without authorization recorded thereon; wherein

15 in a normal state of use, a unique authentication data is allotted to and recorded on each of said external storage medium, said authentication data being copied as it is to an external storage medium copied without authorization; and

said data vending machine includes

20 a data updating apparatus in which an external storage medium is detachably mountable, for writing a data item designated by a user to said external storage medium,

data management table managing data by recording authentication data of an external storage medium of which use is prohibited, and

25 means responsive to mounting of said external storage medium to said data updating apparatus, for reading said authentication data of said external storage medium, determining whether said authentication data corresponds to the prohibited use by making a reference to said management table, and controlling an operation of said data updating

30 apparatus in accordance with the result of determination.

19. The copied data detecting system according to claim 18, wherein said data vending machine further includes means responsive to the

determination by said control means that said authentication data is not for the data of which use is prohibited, adding said authentication data to said data management table, and updating authentication code of said external storage medium by generating a new unique authentication code.

20. A data reproducing apparatus for reproducing digital data including reproducing apparatus specifying information specifying an apparatus capable of reproduction, comprising:

a storage apparatus storing reproduction apparatus ID information unique to said reproducing apparatus;

a first determining apparatus determining whether said reproduction apparatus is capable of reproducing said digital data from said reproduction apparatus ID information and said reproducing apparatus specifying information; and

a control apparatus enabling or disabling reproduction of digital data by said reproducing apparatus dependent on the result of determination by said first determining apparatus.

21. The data reproducing apparatus according to claim 20, wherein said digital data includes display data reproduced visually; and

said reproducing apparatus comprising a display apparatus for visually reproducing and displaying said digital data.

22. The data reproducing apparatus according to claim 20, further comprising an ID information input apparatus responsive to determination by said first determining apparatus that said reproducing apparatus is not a reproducing apparatus capable of reproducing said digital data, urging a user to enter a reproducing apparatus ID information.

23. The data reproducing apparatus according to claim 22, further comprising

a second determining apparatus determining whether the data reproducing apparatus specified by the reproducing apparatus ID

information input by said ID information input apparatus is a reproducing apparatus capable of reproducing said digital data; wherein

said control apparatus enables or disables reproduction of digital data by said reproducing apparatus dependent on the result of

5   determination by said second determining apparatus.

24.   The data reproducing apparatus according to claim 23, further comprising:

an update selecting apparatus responsive to the determination by

10   said second determining apparatus that the data reproducing apparatus specified by the reproducing apparatus ID information input by said ID information input apparatus is a reproduction apparatus capable of reproducing said digital data, allowing the user to select whether said reproducing apparatus specifying information is to be updated by said input

15   reproducing apparatus ID information; and

an updating apparatus responsive to the selection by said update selecting apparatus that said reproducing apparatus specifying information is to be updated by said input reproducing apparatus ID information, updating said reproducing apparatus specifying information by said input

20   reproducing apparatus ID information.

25.   A data reproducing apparatus for reproducing digital data including external storage medium specifying information specifying an external storage medium, said external storage medium corresponding to

25   external storage medium identification information allocated uniquely to each external storage medium in advance, said reproducing apparatus comprising:

an external storage medium identification information reading apparatus to which an external storage medium is mountable, for reading

30   the external storage medium identification information recorded on the mounted external storage medium;

a first determining apparatus determining whether said external storage medium specifying information included in said digital data

satisfies a prescribed relation with said external storage medium identification information; and

a control apparatus for enabling or disabling reproduction of the digital data by said reproducing apparatus dependent on the result of determination by said first determining apparatus.

26. The data reproducing apparatus according to claim 25, wherein said digital data includes display data reproduced visually;

said reproducing apparatus comprising a display apparatus for visually reproducing and displaying said digital data.

27. The data reproducing apparatus according to claim 20, wherein said reproducing apparatus specifying information is recorded when reproduction is first performed by the data reproducing apparatus.

28. The data reproducing apparatus according to claim 20, wherein said reproducing apparatus specifying information is recorded when digital data is sold.

29. A display apparatus reproducing and displaying digital data including reproducing apparatus specifying information specifying an apparatus capable of reproduction and copy permission information, comprising:

copy permission determining means for reading said copy permission information and for determining whether copying of said digital data is permitted or not;

ID information determining means for determining whether the display apparatus is capable of reproducing said digital data from display apparatus ID information unique to said display apparatus and said reproducing apparatus specifying information; and

display control means for controlling display and non-display of said digital data dependent on the result of determination by said copy permission determining means and said ID information determining means.

30.   The display apparatus according to claim 29, wherein
said display control means controls the display such that the digital
data is displayed regardless of the result of determination by said ID
5   information determining means, when it is determined by said copy
permission determining means that copying of said digital data is
permitted.